

What is claimed is:

1. A method of preparing a branched polymer comprising mixing together a monofunctional monomer at least comprising a methacrylate monomer, said monofunctional monomer having one polymerisable double bond per molecule with from 0.3 – 100% w/w, based on the weight of the monofunctional monomer, of a polyfunctional monomer having at least two polymerisable double bonds per molecule and from 0.0001 – 50% w/w, based on the weight of the monofunctional monomer, of a chain transfer agent and optionally a free-radical polymerisation initiator and thereafter reacting said mixture to form said polymer, wherein the weight average molecular weight (Mw) of the branched polymer is in the range of 2,000 to 200,000.
2. A method of preparing a branched polymer comprising mixing together a monofunctional monomer at least comprising a methacrylate monomer, said monofunctional monomer having one polymerisable double bond per molecule with from 0.3 – 100% w/w, based on the weight of the monofunctional monomer, of a polyfunctional monomer having at least two polymerisable double bonds per molecule and from 0.0001 – 50% w/w, based on the weight of the monofunctional monomer, of a chain transfer agent and optionally a free-radical polymerisation initiator and thereafter reacting said mixture to form said polymer, wherein the polyfunctional monomer is at least one monomer selected from the group consisting of ethylene glycol di(meth)acrylate, tripropylene glycol di(meth)acrylate, butanediol di(meth)acrylate, neopentyl glycol di(meth)acrylate, diethylene glycol di(meth)acrylate, triethyleneglycol di(meth)acrylate, dipropylene glycol diethylene glycol di(meth)acrylate, triethylene glycol di(meth)acrylate, dipropylene glycol di(meth)acrylate, allyl (meth) acrylate, divinyl benzene, tripropylene glycol tri(meth)acrylate, trimethylol propane tri(meth)acrylate, pentaerythritol tri(meth)acrylate, pentaerythritol tetra(meth)acrylate and dipentaerythritol hexa(meth)acrylate.
3. A method of preparing a branched polymer comprising mixing together a monofunctional monomer comprising at least a methacrylate monomer, said monofunctional monomer having one polymerisable double bond per molecule, with from 0.5 – 100% w/w, based on the weight of the monofunctional monomer, of a polyfunctional monomer having at least two polymerisable double bonds per molecule and from 0.0001 – 50% w/w, based on

the weight of the monofunctional monomer, of a chain transfer agent and optionally a free-radical polymerisation initiator and thereafter reacting said mixture to form said polymer.

4. The method of claim 1 wherein said chain transfer agent comprises a monofunctional thiol or a polyfunctional thiol.

5. The method of claim 2 wherein said chain transfer agent comprises a monofunctional thiol or a polyfunctional thiol.

6. The method of claim 3 wherein said chain transfer agent comprises a monofunctional thiol or a polyfunctional thiol.

7. The method of claim 1 wherein said monofunctional monomer has one polymerisable double bond per molecule with from 0.5 – 100% w/w, based on the weight of the monofunctional monomer, of said polyfunctional monomer.

8. The method of claim 2 wherein said monofunctional monomer has one polymerisable double bond per molecule with from 0.5 – 100% w/w, based on the weight of the monofunctional monomer, of said polyfunctional monomer.